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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,023	11/03/2003	Kamakshi Sridhar	1285-0133US	3411

24587 7590 04/11/2007

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INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER	
WONG, XAVIER S	
ART UNIT	PAPER NUMBER
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/700,023	SRIDHAR ET AL.	
	Examiner	Art Unit	
	Xavier Wong	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3rd Nov 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *3rd Nov 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3rd Nov 2003 & 12th Oct 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statements

The examiner has considered the information disclosure statements submitted on *3rd November 2003* and *12th October 2006*.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1, 6, 17** and **23** rejected under 35 U.S.C. 102(b) as being anticipated by **Xie et al** ("*Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks*").

Consider claims **1, 6, 17** and **23**, **Xie et al** clearly show and disclose a method, a Metropolitan Network (ATM-Ethernet) switch and apparatus for scheduling high-priority packets by determining a maximum queuing delay allowed for 2 or more cells/packets (as shown on pg. *1078* table *1* with 4 traffic flows). Upon arrival of a/each cell, a deadline time, which determines the priority, is assigned to that cell. The cells are transmitted in the order of their deadlines according to Earliest-Deadline-First scheduling scheme, which clarifies a cell that has smallest maximum queuing delay has higher transmission

priority over others (pg. *1076* left-hand-side lines *4-18*, *46-60*; right-hand-side lines *24-55*).

Claims **8-12** and **15** are rejected under 35 U.S.C. 102(b) as being anticipated by **Onvural et al (U.S Pub 2002/0150115 A1)**.

Consider claims **8-12**, **Onvural et al** clearly show and disclose a method to schedule high-priority packets by utilizing a sorter *14* embodied in a scheduler *10* that assigns an arrival time to an incoming packet of a queue, stores the packet into a slot (a certain position) and eventually locates to table *40/42/44* (acting as POS table), schedules the packet to be transmitted on a single outgoing link *18* to an intended destination (paragraphs *0019-20*, *23-24* & *39*; fig. *1* & *3*). **Onvural et al** further disclose array *19* (acting as Qmax table) that stores a maximum delay allowed for the input queues *12* (paragraph *0025*; fig. *2*). Together, the 2 tables – table *40/42/44* (POS table) and the array *19* (Qmax table) – determine a timestamp (for determining which packet has the higher-priority), which is the sum of the arrival time and the maximum delay allowed (paragraphs *0027-28*).

Consider claim **15**, **Onvural et al** clearly show and disclose a method in which a timestamp is assigned to a packet according to an Earliest-Deadline-First (EDF) scheduler and the sorter (14) /slots (26), in which the slots eventually locate to table *40/42/44* to act as a POS/first table, determines the packet order (based on higher-priority) upon the packet arrival to the input queue (paragraphs *0022-27* & *39;* figs. *1-3*).

Therefore, the updating of a first table takes place when a high-priority packet enters the queue.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims **2**, **5**, **18**, **21**, **24** and **25** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Xie et al** ("*Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks*") in view of **Onvural et al (U.S Pub 2002/0150115 A1**).

Consider claims **2**, **18**, **24** and **25**, and as applied to claims **1**, **17**, **23** and **24**, **Xie et al** clearly show the claimed method and packet switch.

However, **Xie et al** did not explicitly mention a POS table that lists, for each high-priority packet that has entered the switch, a position of the high-priority packet in a queue of the switch, a time the high-priority packet entered the queue, and an intended destination of the high-priority packet; means for creating a Qmax table for storing a maximum allowed queuing delay for each of several possible intended destinations; and means for using the Qmax table and the POS table to determine the maximum queuing delay allowed for each of the high-priority packets in the queue of the switch.

In the same field of endeavor, **Onvural et al** disclose a sorter *14* embodied in a scheduler *10* that assigns an arrival time to an incoming packet of a queue, stores the packet into a slot (a certain position) and eventually locates to table *40/42/44* (acting as POS table), schedules the packet to be transmitted on a single outgoing link *18* to an intended destination (paragraphs *0019-20*, *23-24*; fig. *1* & *3*). **Onvural et al** further disclose array *19* (acting as Qmax table) that stores a maximum delay allowed for the

input queues *12* (paragraph *0025*; fig. *2*). Together, the sorter/slot combination (POS table) and the array (Qmax table) determine a timestamp (for determining which packet has the higher-priority), which is the sum of the arrival time and the maximum delay allowed (paragraphs *0027-28*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of a POS table that lists, for each high-priority packet that has entered the switch, a position of the high-priority packet in a queue of the switch, a time the high-priority packet entered the queue, and an intended destination of the high-priority packet; means for creating a Qmax table for storing a maximum allowed queuing delay for each of several possible intended destinations; and means for using the Qmax table and the POS table to determine the maximum queuing delay allowed for each of the high-priority packets in the queue of the switch as taught by **Onvural et al**, in the method and packet switch of **Xie et al**, for the purpose of scheduling data transmission according to their earliest deadlines.

Consider claim **5**, and as applied to claim **2**, **Xie et al** clearly show and disclose the claimed method.

However, **Xie et al** did not explicitly mention updating of a first table takes place when a high-priority packet enters the queue.

In the same field of endeavor, **Onvural et al** clearly show and disclose a method in which a timestamp is assigned to a packet according to an Earliest-Deadline-First (EDF) scheduler and the sorter (14) /slots (26) in which the slots eventually locate to

table *40/42/44*, acting as a POS/first table, determines/updates the packet order (based on higher-priority) upon the packet arrival to the input queue (paragraphs *0022-27;* figs. *1-3*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of updating of a first table takes place when a high-priority packet enters the queue as taught by **Onvural et al**, in the method of **Xie et al**, for the purpose of ensuring the packet with the highest priority regardless of queue-entering order is being transmitted first.

Consider claim **21**, and as applied to claim **18**, **Xie et al** clearly show and disclose the claimed apparatus except the means for updating the POS table each time a new high-priority packet enters the queue.

In the same field of endeavor, **Onvural et al** disclose a method in which a timestamp is assigned to a packet according to an Earliest-Deadline-First (EDF) scheduler and the sorter (14) /slots (26), in which the slots eventually locate to table *40/42/44* to act as a POS/first table, determines the packet order (based on higher-priority) upon the packet arrival to the input queue (paragraphs *0022-27* & *39*; figs. *1-3*). In summary, the updating of a first table takes place when a high-priority packet enters the queue.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of the means for updating the POS table each time a new high-priority packet enters the queue as taught

by **Onvural et al**, in the apparatus of **Xie et al**, for the purpose of ensuring the packet with the earliest (time) deadline to be transmitted first regardless of queue-entry order.

Claims **3**, **19** and **26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Xie et al** ("*Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks*") in view of **Onvural et al (U.S Pub 2002/0150115 A1)**, **Henderson et al (U.S Pub 2003/0154328 A1)** and **Aukia et al (U.S Pat 6,594,268 B1)**.

Consider claims **3**, **19** and **26**, and as applied to claims **2**, **18** and **24**, **Xie et al** in view of **Onvural et al** clearly show and disclose the claimed method and apparatus.

However, **Xie et al** in view of **Onvural et al** did not explicitly mention label switched paths (LSP) being applied between a switch and intended destinations.

In a related field of endeavor, **Henderson et al** disclose the usage of an ethernet metropolitan area network with VPLS bridging and label switched routers (LSR) for scheduling/prioritizing queues for transmission; therefore, the application of LSRs entails that label switched paths (LSP) are used to route packets to their destinations (paragraphs *0017,19, 36-39 & 41*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of label switched paths (LSP) being applied between a switch and intended destinations as taught by **Henderson et al**, in the method and apparatus of **Xie et al**, as modified by **Onvural et al**, for the purpose of supporting rerouting of packets quickly in case of link and/or router failure.

However, **Xie et al** in view of **Onvural et al** and **Henderson et al** did not explicitly mention the determining a number of hops along a path; and dividing a maximum queuing delay allowed for the path by the number of hops along the path to determine the maximum queuing delay allowed for each hop.

In the same field of endeavor, **Aukia et al** disclose an end-to-end/maximum delay time being divided into per hop delays or end-to-end delay ÷ maximum number of hops for the packet flow (col. *16* lines *28-42*, *62-67* & col. *17* lines *1-7*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of determining a number of hops along a path; and dividing a maximum queuing delay allowed for the path by the number of hops along the path to determine the maximum queuing delay allowed for each hop as taught by **Aukia et al**, in the method and apparatus of **Xie et al**, and as modified by **Onvural et al** and **Henderson et al**, for the purpose of knowing whether the packet flow occupies more than a predetermined level of bandwidth.

Claims **7** and **22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Xie et al** ("*Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks*") in view of **Huang et al** (**U.S Pat 6,546,013 B1**).

Consider claims **7** and **22**, and as applied to claims **1** and **17**, **Xie et al** clearly show and disclosed the claimed invention except a queue that is capable of performing an n-packet look-ahead.

In the same field of endeavor, **Huang et al** disclose MPEG packets lining up in a channel/queue as shown in figure *2* have the ability to look ahead "n" time slices (col. *3* lines *66-67*, col. *4* lines *1-11* & col. *5* lines *57-60*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of a queue that is capable of performing an n-packet look-ahead as taught by **Huang et al**, in the method and apparatus of **Xie et al**, for the purpose of seeing whether the system have sufficient bandwidth to accommodate video data for output.

Claim **13** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Onvural et al** (**U.S Pub 2002/0150115 A1**) in view of **Henderson et al** (**U.S Pub 2003/0154328 A1**) and **Aukia et al** (**U.S Pat 6,594,268 B1**).

Consider claim **13** and as applied to claim **8**, **Onvural et al** clearly show and disclose the claimed method and apparatus.

However, **Onvural et al** did not explicitly mention label switched paths (LSP) being applied between a switch and intended destinations.

In a related field of endeavor, **Henderson et al** disclose the usage of an ethernet metropolitan area network with VPLS bridging and label switched routers (LSR) for scheduling/prioritizing queues for transmission; therefore, the application of LSRs entails that label switched paths (LSP) are used to route packets to their destinations (paragraphs *0017,19, 36-39* & *41*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of label switched paths (LSP) being applied between a switch and intended destinations as taught by **Henderson et al**, in the method and apparatus of **Onvural et al**, for the purpose of supporting rerouting of packets quickly in case of link and/or router failure.

However, **Onvural et al** in view of **Henderson et al** did not explicitly mention the determining a number of hops along a path; and dividing a maximum queuing delay allowed for the path by the number of hops along the path to determine the maximum queuing delay allowed for each hop.

In the same field of endeavor, **Aukia et al** disclose an end-to-end/maximum delay time being divided into per hop delays or end-to-end delay ÷ maximum number of hops for the packet flow (col. *16* lines *28-42*, *62-67* & col. *17* lines *1-7*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of determining a number of hops along a path; and dividing a maximum queuing delay allowed for the path by the number of hops along the path to determine the maximum queuing delay allowed for each hop as taught by **Aukia et al**, in the method and apparatus of **Onvural et al**, and as modified by **Henderson et al**, for the purpose of knowing whether the packet flow occupies more than a predetermined level of bandwidth.

Claim **14** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Onvural et al (U.S Pub 2002/0150115 A1)** in view of **Henderson et al (U.S Pub 2003/0154328 A1)** and **Guerin et al (U.S Pub 2003/0072270 A1)**.

Consider claim **14**, and as applied to claim **8**, **Onvural et al** clearly show and disclose the claimed method.

However, **Onvural et al** did not explicitly disclose the creation of Qmax table is only performed once during LSP setup.

In a related field of endeavor, **Henderson et al** disclose the usage of an ethernet metropolitan area network with VPLS bridging and label switched routers (LSR) for scheduling/prioritizing queues for transmission; therefore, the application of LSRs entails that label switched paths (LSP) are used to route packets to their destinations (paragraphs *0017,19, 36-39* & *41*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of label switched paths (LSP) being applied between a switch and intended destinations as taught by **Henderson et al**, in the method and apparatus of **Onvural et al**, for the purpose of supporting rerouting of packets quickly in case of link and/or router failure.

However, **Onvural et al**, and as modified by **Henderson et al**, did not explicitly disclose the creation of Qmax table is only performed once during a path setup.

In the same field of endeavor, **Guerin et al** disclose a route table, which stores information such as maximum delay through a path, is constructed, initialized and updated after path origin and destination address are defined (paragraphs *0005-6, 51-*

52; figs. *2-5*). Therefore, it is obvious that the table is only built *once* and *no* reconstruction of the table (only updating of table entries) would take place.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of the creation of Qmax table is only performed once during a path setup as taught by **Guerin et al**, in the method of **Onvural et al**, and as modified by **Henderson et al**, for the purpose of avoiding unnecessary overhead during packet routing process.

Claim **16** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Onvural et al (U.S Pub 2002/0150115 A1)** in view of **Huang et al (U.S Pat 6,546,013 B1)**.

Consider claim **16**, and as applied to claim **8**, **Onvural et al** clearly show and disclose the claimed method except a queue that is capable of performing an n-packet look-ahead.

In the same field of endeavor, **Huang et al** disclose MPEG packets lining up in a channel/queue as shown in figure *2* have the ability to look ahead "n" time slices (col. *3* lines *66-67*, col. *4* lines *1-11* & col. *5* lines *57-60*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of a queue that is capable of performing an n-packet look-ahead as taught by **Huang et al**, in the method and apparatus of **Onvural et al**, for the purpose of seeing whether the system have sufficient bandwidth to accommodate video data for output.

Claims **4** and **20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Xie et al** ("*Cell Discarding Policies Supporting Multiple Delay and Loss Requirements in ATM Networks*") in view of **Onvural et al** (**U.S Pub 2002/0150115 A1**), and in further view of **Henderson et al** (**U.S Pub 2003/0154328 A1**) as applied to claims **2** and **18**, and in further view of **Guerin et al** (**U.S Pub 2003/0072270 A1**).

Consider claims **4** and **20**, and as applied to claim **2** and **18**, **Xie et al**, as modified by **Onvural et al** clearly show and disclose the claimed method.

However, **Xie et al**, as modified by **Onvural et al** did not explicitly disclose the creation of Qmax table is only performed once during LSP setup.

In a related field of endeavor, **Henderson et al** disclose the usage of an ethernet metropolitan area network with VPLS bridging and label switched routers (LSR) for scheduling/prioritizing queues for transmission; therefore, the application of LSRs entails that label switched paths (LSP) are used to route packets to their destinations (paragraphs *0017,19, 36-39 & 41*).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of label switched paths (LSP) being applied between a switch and intended destinations as taught by **Henderson et al**, in the method and apparatus of **Xie et al**, and as modified by **Onvural et al**, for the purpose of supporting rerouting of packets quickly in case of link and/or router failure.

However, **Xie et al**, as modified by **Onvural et al** and **Henderson et al**, did not explicitly disclose the creation of Qmax table is only performed once during a path setup.

In the same field of endeavor, **Guerin et al** disclose a route table, which stores information such as maximum delay through a path, is constructed, initialized and updated after path origin and destination address are defined (paragraphs *0005-6*, *51-52*; figs. 2-5). Therefore, it is obvious that the table is only built *once* and *no* reconstruction of the table (only updating of table entries) would take place.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of the creation of Qmax table is only performed once during a path setup as taught by **Guerin et al**, in the method of **Xie et al**, and as modified by **Onvural et al** and **Henderson et al**, for the purpose of avoiding unnecessary overhead during packet routing process.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A.) **Kobayakawa et al** (**U.S Pub 2003/0202517 A1**) mention a packet output controlling apparatus with a packet scheduler computes bandwidth distribution rate for queues and a table that stores packet arrival time (timestamp), position, and destination in a queue.

B.) **Chan et al (U.S Pub 2006/0271704 A1)** mention a search order table that calculates and stores maximum queuing delays, ranks queues in sequential order of the destinations and positions in the table.

C.) **Soffer et al (U.S Pat 6,233,429 B1)** mention average delay for a certain round trip (by hops) of a satellite communication system.

D.) **Dumitrescu et al** ("*SWIFT – Simple Weighted Integration of Differentiated Traffic*") mention the buffer to which a packet is assigned to is based on comparing the packet's maximum remaining delay divided by maximum expected number of remaining hops. If there is no buffer with the expected delay smaller than the result then the packet is assigned to the buffer with the smallest expected delay.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xavier Wong whose telephone number is (571) 270-1780. The examiner can normally be reached on Monday through Friday 8 am - 5 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Xavier S. Wong
X.S.W / x.s.w
2nd April 2007

RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER
4/4/07